

IDAHO NATIONAL ENGINEERING  
ENVIRONMENTAL LABORATORY PUBLIC MEETING

Test Area North Comprehensive Remedial  
Investigation/Feasibility Study Proposed Plan

FINAL AS OF NOVEMBER 18, 1999

February 23, 1998  
Idaho Falls, Idaho  
7:00 p.m.

Nancy Schwartz Reporting  
2421 Anderson Street  
Boise, Idaho 83702  
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Page 2

1 IDAHO FALLS, IDAHO, MONDAY, FEBRUARY 23, 1998  
2  
3 MR. SIMPSON: I'm Erik Simpson. I'm the  
4 community relations plan coordinator for the INEEL,  
5 environmental restoration program. And I'll be  
6 facilitating the meeting tonight. We're here to  
7 talk about the Test Area North Comprehensive  
8 Remedial Investigation/Feasibility Study. You will  
9 see from the presentation that Test Area North is a  
10 true Cold War Facility. This is the fourth  
11 Comprehensive Remedial Investigation/Feasibility  
12 Study that we completed under the Federal Facility  
13 Agreement and Consent Order, which is our legally  
14 binding clean-up agreement between the  
15 Department of Energy, Environmental Protection  
16 Agency and state of Idaho. I should mention that  
17 we have five more comprehensive investigations  
18 under way at this time, and we will be releasing  
19 proposed plans on those over the course of the next  
20 five years.  
21 The last time that we had a public  
22 meeting in Idaho Falls was just about a month  
23 ago, actually, when we were discussing the  
24 Naval Reactors Facility and Argonne National  
25 Laboratory-West Comprehensive Investigation. And

Page 3

1 the agencies have extended the public comment  
2 period on those proposed plans until March 12th, so  
3 we have roughly two and a half weeks to go.  
4 The agencies plan to sign Records of  
5 Decision for those two projects sometime this  
6 summer and any remediation activities will probably  
7 begin in the fall or in the spring of next year.  
8 The purpose of tonight's meeting is,  
9 basically, three-fold. First, we're here to  
10 present the results of the Comprehensive  
11 Remediation Investigation/Feasibility Study for  
12 Test Area North. Second, the agencies and project  
13 managers associated with this investigation are  
14 here, and we're encouraging people to ask questions  
15 about the investigation and the proposed plan.  
16 Third, we're here to get your comments on the  
17 proposed plan. Your oral comments, and also you  
18 can submit written comments. The proposed plan has  
19 a postage-paid sheet on the back, and you can just  
20 write your comments and fold it and place it in the  
21 mail, and we'll get that.  
22 Your comments will be responded to  
23 in the Responsiveness Summary section of the Record  
24 of Decision, and the Record of Decision is  
25 scheduled to be signed sometime this fall.

Page 4

1 We have a court reporter here  
2 tonight and we will be recording all portions of  
3 this meeting. And I will talk a little bit more  
4 about that later. We will be using a microphone  
5 tonight, too, to try to make amends with our court  
6 reporter from the last time that we were here.  
7 I would like to direct your  
8 attention to the resource table at the back of the  
9 room. We have fact sheets on Test Area North and  
10 some other facilities. We have Citizens' Guides.  
11 We have the Proposed Plan for Test Area North and  
12 also for Naval Reactors Facility and Argonne  
13 National Laboratory-West. We have the Community  
14 Relations Plan and the Federal Facility Agreement  
15 and Consent Order.  
16 I would like to take a second to  
17 review the agenda. Shortly, I will introduce  
18 everyone who is associated with the Test Area North  
19 comprehensive investigation, then the state and EPA  
20 representatives will say a few statements -- or  
21 make a few statements, and then we will hear the  
22 presentations on the comprehensive proposed plan.  
23 Following that, we will have a question and answer  
24 session where you can ask questions of the project  
25 managers and agency representatives. I should

Page 5

1 mention, also, if, during the presentation  
2 something isn't clear to you, feel free to  
3 interrupt the speaker and just ask the question.  
4 Then after the question and answer session, we will  
5 have the comment session where your comments are  
6 entered into the record.

7 On the back of the agenda is an  
8 evaluation form. I'm encouraging you to give us  
9 your impressions of this meeting tonight, and we  
10 will be using this -- your comments to shape any  
11 future public meetings. Also we have an attendance  
12 sheet in the back and please sign in, if you  
13 haven't already. And we will use that to send  
14 copies of the Record of Decision too.

15 With that, I would like to introduce  
16 everyone here who is here who is associated with  
17 the project. Mark Shaw is the Waste Area Group 1  
18 manager. Waste Area Group 1 also refers to the  
19 Test Area North. He is the Waste Air Group 1  
20 manager for the Department of Energy; and he's been  
21 involved in the investigation for roughly a year  
22 and a half --

23 MR. SHAW: A couple years.

24 MR. SIMPSON: A couple years. Doug  
25 Burns, he's with Lockheed Martin Idaho Technology

Page 6

1 Company. He was instrumental in conducting the  
2 risk assessment for the comprehensive  
3 investigation. And also Dave Michael is with  
4 Lockheed Martin Technology Company. He is the  
5 project manager on the Test Area North  
6 comprehensive investigation. Also in the audience  
7 we have Tim Green, who is the Lockheed Waste Area  
8 Group 1 manager, basically Dave's boss.

9 I would like to introduce Clyde  
10 Cody. Clyde is with the State of Idaho Department  
11 of Health and Welfare Division of Environmental  
12 Quality. And Matt Wilkening, Matt is with the  
13 Environmental Protection Agency Region 10 office  
14 in Seattle, and they were also involved in this  
15 investigation, and they are both going to make some  
16 statements.

17 MR. CODY: We, as the state feels  
18 this is a good plan, and we have worked closely  
19 with the DOE and EPA on this, but probably most  
20 importantly is that we feel that this is the time  
21 for public input, and we will be looking forward to  
22 whatever we hear, as far as your ideas on the  
23 preferred alternatives to see what the public  
24 thinks of this. So it isn't written in stone yet,  
25 so we will look forward to your comments.

Page 7

1 MR. WILKENING: Matt Wilkening with  
2 EPA out of Seattle. I have been working on the  
3 Test Area North since about 1995. I have been  
4 working with this particular project since its  
5 inception, and we found working cooperatively with  
6 the other two agencies, we have reached what we  
7 think to would be a fairly good solution to the  
8 contamination out there. But as Clyde mentioned,  
9 we are accepting public comment at this time to  
10 make sure that the public also accepts or buys into  
11 our decisions on this.

12 MR. SIMPSON: Thanks, you guys.  
13 Now, I would like to turn it over to Mark Shaw.  
14 Once again, he's the Department of Energy Waste  
15 Area Group 1 manager. And Mark will give a brief  
16 outline of the investigation and history of the  
17 Test Area North.

18 MR. SHAW: Like Erik said, Test Area  
19 North got started back in the Cold War days. Back  
20 in 1954 when President Eisenhower heard a rumor  
21 that the Russians were building a nuclear powered  
22 airplane. Like every good president, he thought if  
23 they had one, we better have one too. So we  
24 started the Aircraft Nuclear Propulsion Program and  
25 it started it out in the Arco Desert. I don't know

Page 8

1 if you can see these, I hope so. If not, you can  
2 come up and have a look afterwards, but as part of  
3 that Aircraft Nuclear Propulsion Program -- this is  
4 actually the hanger they built for the airplane.  
5 They never actually built the plane, but they have  
6 a nice garage for it. This is the former IET  
7 facility, Initial Engine Test Facility where they  
8 actually test part of the engines.

9 After that program wound down in  
10 about '61, the emphasis really shifted to reactor  
11 research. They built a Water Reactor Research  
12 Test Facility where they tested pool and  
13 table-type reactors. Right next to the hanger is  
14 the LOFT facility, Loss of Fluid Test, where they  
15 looked at the effects the cool water losses on  
16 reactor cores. They do the experiments and they  
17 bring the cores down to the TAN Hot Shops and take  
18 a look at them.

19 We all remember the Three-mile  
20 Island accident back in Pennsylvania. The fuel for  
21 that was brought out here to the Hot Shop, and it's  
22 stored out here still. Probably the most  
23 interesting project going on out there now is in  
24 the old hanger. Actually, they built a building  
25 inside the hanger where they built tank armor for

1 the M1A1 tank.

2 While that activity is going on over  
3 the years -- and as we know, waste management  
4 practices back in the '50s and '60s were certainly  
5 not of today's standards and ended up with releases  
6 to the environment. When we started this  
7 investigation two and a half or three years ago, we  
8 went through every facility at TAN, all the active  
9 facilities, all the NF activity facilities, the  
10 abandoned facilities, looking for potential release  
11 sites. And we identified 94 of those. Thirty-one  
12 of those were addressed in the OU 1-07B Record of  
13 Decision. OU 1-07B, this is the operable unit for  
14 the TAN groundwater project. Thirty-one of those  
15 sites were addressed there.

16 Of the remaining sites, eight have  
17 an unacceptable risk for human health, two have an  
18 unacceptable ecological risk, and the remaining  
19 53 were recommended for No Further Action.

20 What we're really here to talk about  
21 tonight are the eight sites with an unacceptable  
22 risk to human health. The two ecological sites are  
23 going to be addressed in more detail and  
24 site-wide ecological risk assessment. When you do  
25 an eco risk assessment, you look at the impact that

1 your site has on the entire population of  
2 receptors. On two eco sites, they are too small to  
3 have an effect on a population level, so we're  
4 going to look at the cumulative effects when  
5 combined with the other sites.

6 What I would like to do is take you  
7 through the eight sites that have unacceptable  
8 human health risk and kind of go on a little tour  
9 here. The eight sites have been grouped into three  
10 categories. The first being non-rad contaminated  
11 soils. We also have rad contaminated soils, and  
12 then there are two tank sites. This is the first  
13 of the non-rad soil sites that Dave will be talking  
14 about later.

15 This is one of the burn pits, and  
16 this one is a little more exciting picture. Back  
17 when they were be building TAN, they would take  
18 things like construction debris, waste, paint,  
19 solvents like turpentine, that kind of stuff and  
20 they would take them out to the burn pits, put the  
21 stuff in and at the end of the day they would just  
22 burn it. There is lead in the burn pits, which is  
23 the contaminant that we're concerned with there.

24 The other non-rad soil site is a  
25 mercury spill site. Back in -- I think it was 1958

1 when they were moving one of those airplane  
2 engines, they managed to spill from 800 to 1,000  
3 gallons of mercury on the railroad tracks. They  
4 cleaned most of it up right after it happened.  
5 Some contamination was left, went back and did a  
6 removal action a few years ago where they actually  
7 took the tracks out, dug down about four feet, but  
8 there is still some residual mercury remaining.

9 And this is the diesel site. Diesel  
10 spill site. There is a tank here and a tank over  
11 here and about 100 feet of pipe connecting them.  
12 The pipe between the two tanks leaked, the tank and  
13 the pipes were removed, but there still is some  
14 residual diesel contamination left.

15 This picture shows both of the rad  
16 soil sites, the first of which sits in this  
17 triangular area over here. It's called Area B,  
18 soil contamination south of the turntable. The  
19 turntable is just off the screen over. This area  
20 was actually contaminated from the area from over  
21 here, which I will talk about in a minute. That is  
22 the PM-2A tank area. The tanks, there was a spill  
23 when they were transferring the contents of these  
24 tanks on the tanker truck, which contaminated some  
25 of the soil in this area. As we all know, the wind

1 only blows in one direction in Idaho, straight  
2 across this way, and actually, it blew  
3 contamination over into this area.

4 Removal action was done, but there  
5 is still five small areas over across the road with  
6 cesium-137. The other rad soil site is this whole  
7 area in the bottom, which is the TSF-07 pond, which  
8 actually extends down. It's about a 35-acre pond.  
9 Five acres, which in this corner here, are  
10 contaminated with cesium-137 and, possibly,  
11 radium-226.

12 And the tank sites, these are the  
13 V-Tanks. These are the main way leading down to  
14 the three tanks, V-1, 2 and 3. V-9 just sits off  
15 the photo here. These are 10,000-gallon stainless  
16 steel tanks. V-9 is about a 400-gallon tank.  
17 These have a really interesting cocktail of waste:  
18 listed hazardous, rad, PCBs, metals, all kinds of  
19 stuff. These were overfilled at one time, so there  
20 was some soil contamination in the area.

21 And the other tank sites, let's go  
22 to this one. These are the PM-2A tanks. This is  
23 the one where there was a spill when they were  
24 transferring the contents to a tanker truck and  
25 this is the stuff that blew across the road into

Page 13

1 the other soil contamination site.

2 These are two 50,000-gallon carbon  
3 steel tanks. They were pumped within about an inch  
4 of the bottom, and they blew some diatomaceous  
5 earth to soak up the remaining liquid. As far as  
6 we know, none of these tanks have ever leaked, but  
7 there is soil contamination around the top from  
8 over-filling and from spills.

9 I hope that gives you kind of a  
10 picture of what we're going to be talking about.  
11 Next, we will have Doug come up and go through  
12 where we're at in the process and talk some more  
13 about risk assessments.

14 MR. BURNS: Okay. As Mark said, as  
15 a result of the investigations at WAG 1, we  
16 identified 94 potential release sites at Test Area  
17 North. And here is kind of an overview of the  
18 assessment process that we followed for these  
19 94 release sites.

20 First of all, we started out with  
21 preliminary investigations. We called these  
22 preliminary investigations Track 1 and Track 2  
23 risk assessments or investigation of these 94  
24 release sites. These preliminary investigations  
25 lead into a No Further Action determinations for

Page 14

1 some sites and also for action determinations.  
2 Specifically, we did four removal actions. There  
3 was a bottle site. There was a mercury spill site  
4 that Mark mentioned, where we cleaned up some of  
5 mercury. There was one Interim Action and the  
6 groundwater contamination, the OU 1-07B groundwater  
7 contamination that Mark mentioned. The groundwater  
8 contamination was produced by injection wells at  
9 TAN, at Test Area North. And this injection well,  
10 back in the 1950s, '60s and '70s waste was injected  
11 down into the aquifer through this injection well.

12 The first removal action that was  
13 conducted at the INEEL was conducted back in 1989,  
14 and it consisted of pulling contaminated sludge out  
15 of this injection well. Well, there is also a  
16 groundwater plume now moving down gradient from  
17 this injection well. The OU 1-07B remedial is  
18 ongoing right now.

19 And this investigation that we're  
20 here to talk about tonight kind of builds on the  
21 OU 1-07B groundwater investigations. Specifically,  
22 for this comprehensive remedial investigation, we  
23 assume that all of the remedial actions that had  
24 been identified in the OU 1-07B Record of Decision  
25 will be successful.

Page 15

1 This investigation of the OU 1-10  
2 investigations then adds -- it assesses risks that  
3 are on top of the risk that would be produced by  
4 the residual contamination OU 1-07B.

5 So moving on, all these Action and  
6 No Further Action determinations fed into the  
7 Comprehensive Remedial Investigation/Feasibility  
8 Study. Here is a copy of that document. It's a  
9 big document. The proposed plan summarizes all the  
10 information in that RI/FS.

11 So the proposed plan feeds into the  
12 decision phase. We will take comments from the  
13 public, from state regulators, and from all those  
14 comments, we will produce a Record of Decision for  
15 OU 1-10. That Record of Decision will then feed  
16 into a remedial design, remedial action phase  
17 monitoring for some sites and maybe No Action  
18 determinations for other sites.

19 The next six slides are going to  
20 summarize the risk assessments that we performed  
21 for this Remedial Investigation/Feasibility Study.  
22 As Mark mentioned, the risk assessment has two  
23 parts, a human health evaluation and an ecological  
24 evaluation. We're here to talk, principally, about  
25 the human health evaluation since the ecological

Page 16

1 risk assessment will be carried forward into the  
2 site-wide ecological risk assessment under WAG 10.

3 Our human health investigation had  
4 two different parts to it. First was an  
5 occupational scenario, where we evaluated risk to a  
6 current worker and risk to a worker who might work  
7 at one of our contaminated sites 100 years in the  
8 future.

9 The second portion of the risk  
10 assessment dealt with a hypothetical residential  
11 scenario where we assessed risks to a resident who  
12 might move to one of our contaminated sites in  
13 100 years.

14 Hopefully, can you see this slide.  
15 This is a slide that depicts the exposure pathways  
16 that we evaluated in our risk assessment.  
17 Basically, exposure pathways is a means by which  
18 contamination can move from the environment into a  
19 human's body. For instance, a person might inhale  
20 contaminated dust or ingest contaminated soil. So  
21 all of these exposure pathways that are shown on  
22 this diagram, we evaluated risks associated with  
23 all those pathways. So for each pathway we came up  
24 with a risk number at each one of our individual  
25 contaminated sites.

1 As a result of that exposure  
2 assessment, we identified this list of contaminants  
3 of concern. So these are the contaminants that we  
4 think our assessment predicts having a potential  
5 for reducing unacceptable risks at WAG 1. First of  
6 all, we have a couple radionuclides, cesium-137,  
7 radium-226. They show up at the TAN disposal pond  
8 and the tank sites.

9 Next, we have several metals,  
10 including mercury, lead, manganese and arsenic.  
11 Mercury, of course, is at the mercury spill site.  
12 Lead shows up at the burn pits. Manganese and  
13 arsenic show up at the disposal pond. Then we have  
14 diesel contamination, specifically at the diesel  
15 spill site. Organic chemicals, these are  
16 principally correlated to solvents, and they are in  
17 the tank sites along with polychlorinated biphenyls  
18 or PCBs show up at the tank sites.

19 The next three slides summarize the  
20 results of the risk assessment. First of all, this  
21 slide deals with the results of the occupational  
22 scenario of our risk assessment. Along this access  
23 here shows risk numbers. Now, risk is, basically,  
24 a probability of a person developing cancer  
25 sometime during his or her lifetime as a result of

1 exposure to a contaminated site.

2 Now, let's imagine we had a site  
3 where a worker at the site had one chance in 10 of  
4 developing cancer as a result of working at the  
5 site. The risk for that site would show up right  
6 here at the one-in-ten level. So this graph is  
7 showing that our calculated risk, our worst  
8 calculated risk in Test Area North falls in here at  
9 the one in 1,000 level.

10 Now, EPA has identified an  
11 acceptable risk level, right here at the one in  
12 10,000 level. So, basically, if there is one chance  
13 in 10,000 of developing cancer, that is an unaccept  
14 risk. So as can you see from this graph, we have  
15 several sites that fall above that level, including  
16 the PM-2A tanks, the V-tank sites, the soil  
17 contamination area and the disposal pond. And the  
18 mercury spill site, as can you see, falls down in  
19 the acceptable risk range for the the occupational  
20 scenario.

21 Now, all of these risks are  
22 calculated assuming that DOE does nothing at the  
23 site. That is our base-case assumption. We assume  
24 that we calculate these risks assuming that DOE  
25 were to walk away. Of course, that is not what

1 will happen, but we calculate the risk that way to  
2 be conservative.

3 Also, I have to mention, in three  
4 sites, the two burn pits and the diesel fuel sites,  
5 all of the contaminants at those sites do not have  
6 toxicity data, so all of those contaminants we had  
7 to assess whether the contamination was acceptable  
8 or not by basing our assessment in comparison to  
9 other levels besides the risk level. For example,  
10 we have a regulatory limit of 400 parts per million  
11 for lead for residential. It's a residential  
12 standard, so we compared our detected lead  
13 concentrations against that standard.

14 The next slide deals with the  
15 residential exposure scenario. The graph is very  
16 similar to the occupational scenario. Under the  
17 residential scenario, we had several more sites  
18 that show unacceptable risk. We had the V-Tank  
19 site, again, the PM-2A tank, the disposal pond, the  
20 soil contamination area, and the mercury spill site  
21 also showed unacceptable risk levels.

22 The final summary slide for the risk  
23 assessment shows the results of the noncarcinogenic  
24 health assessment. The first two slides dealt with  
25 cancer risk. This slide shows noncancer risk.

1 Okay. So, basically, what this slide is showing is  
2 that EPA has done lots of experiments on lots of  
3 different contaminants, and they found for  
4 noncancer health effects, for most contaminants,  
5 there is a level of intake, a level of exposure  
6 that will not cause any health impacts. So, we, as  
7 part of this risk assessment, compared our exposure  
8 at our contaminated sites against this acceptable  
9 level that the EPA has determined for each  
10 contaminant.

11 A contaminant where we have a site  
12 where there are exposures equal to that acceptable  
13 level would fall right here at this hazard  
14 quotient, equal to one spot. So any site that has  
15 a hazard quotient greater than one is  
16 unacceptable. The mercury spill site, the disposal  
17 pond, this soil contamination area, the V-Tanks and  
18 PM-2A tanks all fall at or above the average  
19 quotient equal to one level.

20 Okay. So that summarized the risk  
21 assessment. Now we're going to present some  
22 information about our remedial action objectives  
23 and our proposed remedial activities. Dave Michael  
24 will present that.

25 MR. MICHAEL: So far what we have

Page 21

1 talked about tonight, we have talked about the  
2 history of TAN, Test Area North, and Doug had just  
3 presented our presentation about the risk  
4 associated with the sites up there.

5 What I want to talk about is the  
6 remedial action alternatives that we have looked at  
7 and also to present to you what our preferred  
8 alternatives are. When we started looking at  
9 alternatives, the first thing that we had to do was  
10 to develop remedial action objectives. Now,  
11 remedial action objective are those goals that  
12 would be required to be met if we were to pick a  
13 certain alternative for the remedy. We have it  
14 divided up, and we talked about it so far tonight,  
15 into several different areas.

16 The first area that we are going to  
17 look at is the soil pathways. These are the sites  
18 that have soil contamination. The first one that  
19 we look at are the radiological contaminated sites,  
20 soil sites. And our objective is that anything  
21 that we would do to those sites, we would reduce  
22 the risk, any risk with that site, for both cesium  
23 and radium, to one in 10,000. For the site that  
24 has lead contamination at the site -- and that was  
25 the burn pits, whatever we would choose would have

Page 22

1 to prevent any direct exposure to the lead.

2 Then the last one would be the  
3 mercury spill site. We would have to have an  
4 alternative that would have a hazard quotient of  
5 less than one for the mercury site.

6 The other sites that we looked at  
7 was the V-Tanks, and whatever we do to the V-Tanks,  
8 we've had no indication that the V-Tanks have ever  
9 leaked, but whatever remedy we would pick to  
10 address the tanks, we would have to make sure that  
11 we have no release of the tank contents to the tank  
12 environment.

13 Then the last one I'm just going to  
14 briefly talk about is the co-located facilities.  
15 Co-located facilities are those sites that are next  
16 to or near one of our 94 sites. And these are  
17 sites that we have not addressed -- we have looked  
18 at, but we've made sure that they are not one of  
19 our sites, but we want to make sure in the future  
20 that they don't have any releases to the  
21 environment and that nothing happens from them.

22 And when we started looking at  
23 co-located facilities, there are different times  
24 that those would take place. We want to make sure  
25 that none of the sites that are near our sites

Page 23

1 would ever have a risk greater than one in 10,000.  
2 Also if we were to ever clean these up during the  
3 operation, we want to make sure there is no hazard  
4 quotient greater than one. And also during  
5 decontamination activities at these sites, say when  
6 they go to tear some of these sites down, we want  
7 to make sure there is no release to the environment  
8 that are associated with that decontamination.

9 When we started looking at different  
10 alternatives, we had to have something that we  
11 could compare each alternative to. And that is,  
12 when we came up with an evaluation criteria -- and  
13 after this evaluation criteria is specified by law,  
14 that we have to look at them this way, the first  
15 two criteria that we would look at are something  
16 that we call threshold criteria. Threshold  
17 criteria are those criteria that absolutely have to  
18 be met. Those two are to protect the human health  
19 and the environment, whatever remedy that we were  
20 to pick; and the second, any remedy that we would  
21 pick would have to comply with all laws for both  
22 state and federal recall.

23 The next group of criteria that we  
24 looked at is something what we call balancing  
25 criteria. Balancing criteria is, we would take and

Page 24

1 judge each remedy on a certain scale on how well  
2 this criteria was met. Then we would compare each  
3 one of those remedies with the different criteria.  
4 In other words, say you may have something that  
5 provides a long-term effective process, but that  
6 it does very little, it's not really easy to  
7 implement. Something else may be a lot easier to  
8 implement, but maybe it costs a lot more than one  
9 of these other alternatives. So we compare these  
10 different remedies per these criteria.

11 The last group that we looked at is  
12 the modifying criteria. And modifying criteria is,  
13 first of all, we have to have the state acceptance  
14 in whatever we do. The last one is we have to have  
15 the public's acceptance, or your acceptance, in  
16 whatever we do. That is why we're here tonight.

17 The first group of sites that I want  
18 to talk about are the soil contaminated sites. If  
19 you remember, we talked about both radiological  
20 contaminated sites and nonradiological contaminated  
21 sites. When we were looking at these sites, we  
22 looked at different types of remedies. One of the  
23 remedies that we looked at was no action. What if  
24 we were to just walk away and that would not have  
25 met any of the threshold criteria, those first two

Page 25

1 that we looked at, so it would immediately drop.  
 2 The second criteria that we looked  
 3 at was something that we call limited action.  
 4 Limited action is a remedy that, what we would do  
 5 is control access to the contamination. This would  
 6 be accomplished through various means, primarily  
 7 like a perimeter fence. We have appropriate signs  
 8 that warn you that there is contamination in the  
 9 area, not only fence and signs, but we also control  
 10 any water from flowing over the area. We would  
 11 also, if required, would put a permanent marker in  
 12 place, a permanent concrete marker that would warn  
 13 you about the contamination. It may even result in  
 14 having deed restrictions to the site so that if the  
 15 Department of Energy quit controlling the area and  
 16 it went back to Bureau of Land Management or  
 17 something, there would be documentation saying, to  
 18 prevent anybody from building there.  
 19 Another area that we've we looked at  
 20 is containment. Containment could be anywhere from  
 21 an engineered barrier. It could be a cap. In  
 22 other words, we're going to contain the  
 23 contamination and prevent access. Another remedy  
 24 that we looked at for soil contaminated sites is  
 25 the excavation and disposal. In other words, we

Page 26

1 would go in and actually dig up the contaminated  
 2 soil and dispose of it.  
 3 Then the last one, we may remove it,  
 4 and then just treat it. What I would like to now  
 5 do is, for those soil contaminated sites, is to  
 6 present to you the preferred alternatives. The  
 7 first group that we will look at is the  
 8 nonradiological contaminated sites. These are  
 9 sites that have no radiation contamination. And  
 10 our first one that we would look at is the water  
 11 reactor research test facility burn pit. This was  
 12 the burn pit that we saw that had the van in the  
 13 middle of the picture. This was for the  
 14 construction debris that was burned each day.  
 15 Our preferred alternative after  
 16 looking at all the different remedies would be  
 17 limited action. Again, this would be to create, to  
 18 erect signs, perimeter fencing, to prevent any  
 19 water from ever flowing over it, standing on top of  
 20 it. We would also monitor it. Every year, every  
 21 five years, we would and look and see if this  
 22 remedy was working. So limited action is what our  
 23 preferred alternative for that site is.  
 24 The second one is, again, the other  
 25 burn pit at the TAN support facility, and that

Page 27

1 preferred alternative is also limited action. For  
 2 the site that you saw with the railroad tracks, the  
 3 mercury spill site, our preferred alternative for  
 4 that site is to actually go in, excavate the  
 5 contaminated mercury site, the mercury soils and  
 6 dispose of them off site. When I say "off site," I  
 7 mean off the INEEL.  
 8 The last site that we have that was  
 9 noncontaminated was a diesel spill site. This was  
 10 over the water reactor research test facility  
 11 between the two buildings. That is actually inside  
 12 a facility that has a perimeter fence all the way  
 13 around it already. The spill area that is there  
 14 now is actually below a parking lot and roadway.  
 15 So our preferred alternative for that site would  
 16 also be limited action.  
 17 The other two sites that had soil  
 18 contamination, and these are the two sites that had  
 19 low-level radiological nuclide contamination, the  
 20 first one is the soil that was south of the table  
 21 right along the road there at Test Area North. Our  
 22 preferred alternative for that site would be to go  
 23 and excavate and dig up and remove the soils and  
 24 dispose of those soils on the INEEL at an  
 25 acceptable facility.

Page 28

1 The last one that we will talk about  
 2 for the soil contamination is the disposal pond,  
 3 and if you remember that picture on the bottom,  
 4 it's the 35-acre pond. It has five acres of  
 5 contamination. That site is contaminated with  
 6 cesium, and as Doug said, possibly radium. We have  
 7 done sampling there before. We have had  
 8 indications that there was radium on the site. We  
 9 had indications that we may have radium at the  
 10 site. But through further evaluation, it appears  
 11 that the radium that is there is natural  
 12 occurring. So what we plan on doing -- our  
 13 recommendation right now is limited action. We  
 14 will, in the future, be required to go out and  
 15 perform additional sampling of the site. We want  
 16 to verify that the radium there is actually natural  
 17 occurring. Now, if we were to discover that the  
 18 radium there is not natural occurring, but  
 19 contamination from activities of the Test Area  
 20 North, then, what we would do then is to excavate  
 21 and remove.  
 22 We put the cost of these remediation  
 23 activities on the board here. This one is 1.6  
 24 million, if we were to just control it with a  
 25 limited action. If we actually had to go in and



Page 29

1 dig up that soil and dispose of it on the INEL,  
2 that cost could go up \$20 million. But all the  
3 sampling that we have done so far indicates that  
4 the radium at the pond is naturally occurring, so  
5 we will verify that.

6 The other group of sites that we  
7 will talk about are the tanks, underground storage  
8 tanks. The first one being the V-Tanks, and then  
9 the second, the PM-2A tanks. The different  
10 response actions that we've looked at are very  
11 similar for both tanks. And we have five listed  
12 here, but as you see, if you read through these,  
13 there were different variations of these remedies.

14 We actually end up -- when we looked  
15 at the V-Tanks, we looked at 10 different  
16 variations of these remedies and for the PM-2A  
17 tanks, we looked at nine. Again, as you can see,  
18 our first one that we looked at was no action. It  
19 did not meet any of the threshold criteria, so we  
20 immediately dropped it.

21 We looked at limited action. We  
22 discussed limited action quite a bit tonight. We  
23 talked about soil excavation, removing the tanks  
24 and then treating the contents either on site or  
25 off site and disposing of the soils either on site

Page 30

1 or off site.

2 Other remedies that we looked at was  
3 soil excavation. We would actually treat the  
4 contents in the tanks and leave the tanks there and  
5 then dispose of the soil that is surrounding the  
6 tanks, either on site or off site. This treatment  
7 here -- when I say in situ treatment, what we would  
8 do is actually go in and put in grouting material  
9 and grout the tanks with grout-like concrete, which  
10 would bind the contamination, and then we would  
11 probably leave them in place.

12 Right now -- I don't know, when we  
13 talk about the tanks, these are not only  
14 contaminated with radionuclides, but they are also  
15 contaminated with organics. We're not real sure  
16 what the effect of the organic concentrations would  
17 have on the grouting activities. So right now  
18 we're doing a treatability study, which means that  
19 we're going out and performing laboratory testing  
20 to determine just what organics, what effect that  
21 would have on the grout.

22 The last bulletin you see there is  
23 in situ vitrification of the tank contents and the  
24 soils around the tanks. When we say in situ  
25 vitrification, we're talking about putting graphite

Page 31

1 electrodes, an array of these electrodes around the  
2 contamination and whenever a high current is passed  
3 through these electrodes, heat is created and  
4 essentially melts the soils, the tank, the tank  
5 contents. It would melt it, and whenever it cools,  
6 it actually is a glassified object.

7 So we looked at all these different  
8 alternatives, and we came up with our preferred  
9 alternatives. The first one being for the V-Tanks,  
10 with the V-Tanks we're recommending in situ vitrify  
11 these tanks from the process I just explained.  
12 This will take care of both the tank contents, the  
13 tanks and the soil around the tanks. This  
14 treatment -- or this type of remedy, we're also  
15 performing a treatability study.

16 In situ vitrification has been  
17 around for quite a while. We had done some testing  
18 at the site in the years past, but this type of  
19 technology that we're talking about is a different  
20 arrangement of the electrodes. It's a different  
21 technology in the aspect of the way it heats. The  
22 old method used to heat from the top down, which  
23 caused some problems in the past when working with  
24 tanks. This technology has been developed now that  
25 the melt actually comes in from each side so that

Page 32

1 some of the horror stories that you may have heard  
2 of tanks would not apply here. So we're doing a  
3 treatability study to test this technology,  
4 actually melting a tank and its contents to make  
5 sure that it works. So this is our preferred  
6 alternative. If this treatability study would show  
7 us that this technology is not appropriate for our  
8 V-Tanks, then our fall back position would be with  
9 the grouting of the tanks.

10 The last one that we looked at was  
11 the PM-2A tanks and its contents in the  
12 contaminated soil. What we would do is remove the  
13 soil around the tanks, dispose of them on site, and  
14 when we say in situ treatment of the tank contents,  
15 if you remember when Mark was talking about these  
16 tanks, these tanks, when they were put out of  
17 commission, was actually pumped dry -- what we  
18 consider dry, they still had maybe, like, an inch  
19 of liquid on the bottom. Diatomaceous earth was  
20 put in there to soak up the liquid. These tanks no  
21 longer have free liquid in them.

22 Our preferred alternative for this  
23 one, then, would be to fill up that tank with an  
24 inert material. It may be the grout. It may be  
25 sand, but we would fill these tanks up to fill up

Page 33

Page 35

1 the void space and then we would leave them alone  
 2 then. The contamination is at the bottom of the  
 3 tanks. Because of the physical size of the tanks,  
 4 they are buried, like, 10 feet under the ground.  
 5 The tanks are 15 foot in diameter, so any  
 6 contamination that that is there now is, like,  
 7 25 feet below the surface of the ground. So our  
 8 preferred alternative with this one is to fill it  
 9 up with an inert material.  
 10 So far tonight we've discussed our  
 11 alternatives that we've looked at and then our  
 12 preferred alternative what we presented to you.  
 13 Our total cost, as can see for all of these  
 14 alternatives, is about \$25.8 million. That is for  
 15 the capital cost.  
 16 What we plan on doing is, just in  
 17 the future, after we get your comments, we will  
 18 incorporate your comments and develop a Record of  
 19 Decision, picking alternatives acceptable to  
 20 everyone. That Record of Decision is planning on  
 21 being completed in the fall of this year. And then  
 22 as soon as the Record of Decision is completed and  
 23 approved by all agencies, then we would start the  
 24 remedial action and remedial design process.  
 25 I'm going to turn it back over to

1 of the state? Is it just about the same?  
 2 MR. SIMPSON: What are you referring  
 3 to?  
 4 AUDIENCE MEMBER: How many people  
 5 actually come to these meetings?  
 6 MR. SHAW: This is the first one.  
 7 We're doing it again tomorrow night in Boise and  
 8 then Thursday night in Moscow.  
 9 AUDIENCE MEMBER: Are you proposing  
 10 the same Test Area North? Did you propose that  
 11 last month, too, in January or was that a different  
 12 site?  
 13 MR. SHAW: Those were different.  
 14 MR. SIMPSON: Those facilities, the  
 15 Naval Reactors Facility, which is kind of in the  
 16 middle of site and Argonne National Laboratory-West.  
 17 MR. SIMPSON: Any other questions?  
 18 Now I would like to encourage anyone who has any  
 19 comments to take the mike from me and make the  
 20 comments. I would like to state that when you make  
 21 your comment, please clearly speak your name and  
 22 give your address so we can send you a copy of the  
 23 Record of Decision. Would anyone like to make any  
 24 comments? Yes, Mr. White.  
 25

Page 34

Page 36

1 Erik.  
 2 MR. SIMPSON: Does anyone have any  
 3 questions on what you've seen tonight? Any part of  
 4 the presentation that you need some clarification  
 5 on? So everyone has read the proposed plan, the  
 6 RI/FS and understands everything.  
 7 AUDIENCE MEMBER: Are these all in  
 8 Arco area or how big is the area that you're  
 9 talking about?  
 10 MR. SHAW: That is about 80 square  
 11 miles Test Area North is -- how big would you say?  
 12 MR. SIMPSON: We're talking about a  
 13 very small portion of that in respect to release  
 14 sites.  
 15 AUDIENCE MEMBER: Isn't it right by  
 16 Arco by INEEL?  
 17 MR. SHAW: Yeah, these are on the  
 18 INEEL. Arco sits over here. The sites that we're  
 19 talking about are up here.  
 20 MR. SIMPSON: Any other questions?  
 21 I'm amazed. I guess now we can go ahead and move  
 22 on into the public comment session, unless anyone  
 23 would like to take a short break first.  
 24 AUDIENCE MEMBER: I have a  
 25 question. What was the response like in the rest

1  
 2 PUBLIC COMMENT  
 3  
 4 AUDIENCE MEMBER: Well, for any of  
 5 you guys that have been around for a while, I try  
 6 to go to most of these because it's of interest,  
 7 and I was at the site for a number of years and  
 8 what have you. And I have been involved with  
 9 nuclear projects around the county.  
 10 In going through this TAN proposed  
 11 plan here, this is one of the most, I think,  
 12 complete  
 13 or -- I guess that is the word to use, complete  
 14 assessment of all of these alternatives that I have  
 15 seen. They all covered -- different ones covered  
 16 assessments, but this one seems to be in more  
 17 detail and seems to be -- if you'll pardon the  
 18 expression -- more thought out than some of the  
 19 others.  
 20 I looked at all the alternatives,  
 21 and I think in every case, the alternative that was  
 22 chosen certainly seemed to be the right approach to  
 23 the problem at hand for that particular site.  
 24 Others would have worked, but this, for one reason  
 25 or another, either cost-wise or the use of the land

Page 37

Page 39

1 in the future being catalogued and what have you.  
 2 I was on a task force here several  
 3 years ago where we looked at the whole site, about  
 4 what would happen over the next 10, 25, 50, 75 and  
 5 100 years. Believe it or not, there is the  
 6 possibility that 100 years from now that might be a  
 7 housing area. Who knows? It's hard to tell. So  
 8 all in all, I was pretty well pleased with what I  
 9 read here, and I thought that the alternatives that  
 10 were chosen were pretty apropos.

11 MR. SIMPSON: Thank you. Anyone  
 12 else? Would anyone else like to make a comment?

13 With that, I guess I would like to  
 14 remind people that the comment period remains open  
 15 until March 18. And the next time we will be out  
 16 for public meeting will be for the Comprehensive  
 17 Remedial Investigation/Feasibility Study for the  
 18 Idaho Chemical Processing Plant. So far, that  
 19 project has a great deal of interest, both within  
 20 the state and nationally as well. And we will be  
 21 here in May, I believe the dates are May 5th, 6th  
 22 and 7th. So we will be in Idaho Falls May 5th.

23 With that, I would like to thank  
 24 everyone for coming tonight and feel free to send  
 25 us comments. Once again, there is a comment form

1 September 28, 1998

Page 38

1 on the back of each proposed plan, a postage-paid  
 2 comment form.

3 So thanks for coming.  
 4

5 (Meeting concluded at 8:00 p.m.)  
 6 STATE OF IDAHO ) ss.  
 7 County of Ada )  
 8

9 I, NANCY SCHWARTZ, a Notary  
 10 Public in and for the State of Idaho, do hereby  
 11 certify:

12 That said hearing was taken down by me  
 13 in shorthand at the time and place therein named  
 14 and thereafter reduced to computer type, and that  
 15 the foregoing transcript contains a true and  
 16 correct record of the said hearing, all done to the  
 17 best of my skill and ability.

18 I further certify that I have no  
 19 interest in the event of the action.

20 WITNESS my hand and seal this 20th day  
 21 of March, 1998.

22 \_\_\_\_\_  
 23 Nancy Schwartz, Notary  
 24 Public in and for the  
 25 State of Idaho

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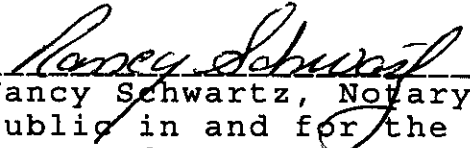
STATE OF IDAHO       )  
                          )   ss.  
County of Ada        )

I, N A N C Y S C H W A R T Z, a Notary  
Public in and for the State of Idaho, do hereby  
certify:

That said hearing was taken down by me  
in shorthand at the time and place therein named  
and thereafter reduced to computer type, and that  
the foregoing transcript contains a true and  
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best of my skill and ability.

I further certify that I have no  
interest in the event of the action.

WITNESS my hand and seal this 20th day  
of March, 1998.

  
\_\_\_\_\_  
Nancy Schwartz, Notary  
Public in and for the  
State of Idaho

My commission expires:  
September 28, 1998

<b>-S-</b>			<b>-5-</b>			<b>active</b> [1] 9:8			<b>Anderson</b> [1] 1:24			<b>average</b> [1] 20:18		
<b>\$20</b> [1] 29:2			<b>50</b> [1] 37:4			<b>activities</b> [6] 3:6			<b>answer</b> [2] 4:23			<b>away</b> [2] 18:25 24:24		
<b>\$25.8</b> [1] 33:14			<b>50,000-gallon</b> [1] 13:2			20:23 23:5 28:19			5:4					
<b>-'-</b>			<b>53</b> [1] 9:19			<b>activity</b> [2] 9:2			<b>apply</b> [1] 32:2			<b>-B-</b>		
<b>'50s</b> [1] 9:4			<b>5th</b> [2] 37:21 37:22			<b>actually</b> [23] 2:23			<b>approach</b> [1] 36:22			<b>B</b> [1] 11:17		
<b>'60s</b> [2] 9:4 14:10						8:4 8:5 8:8			<b>appropriate</b> [2] 25:7			32:7		
<b>'61</b> [1] 8:10						8:24 11:6 11:20			<b>approved</b> [1] 33:23			<b>balancing</b> [2] 23:24		
<b>'70s</b> [1] 14:10						12:2 12:8 26:1			<b>apropos</b> [1] 37:10			23:25		
						27:4 27:11 27:14			<b>aquifer</b> [1] 14:11			<b>barrier</b> [1] 25:21		
						28:16 28:25 29:14			<b>Arco</b> [4] 7:25 34:8			<b>base-case</b> [1] 18:23		
						30:3 30:8 31:6			34:16 34:18			<b>basing</b> [1] 19:8		
						31:25 32:4 32:17						<b>begin</b> [1] 3:7		
<b>-1-</b>			<b>-7-</b>						<b>area</b> [45] 1:6 2:7			<b>below</b> [2] 27:14		
<b>1</b> [8] 5:17 5:18			<b>75</b> [1] 37:4			<b>Ada</b> [1] 38:7			2:9 3:12 4:9			33:7		
5:19 6:8 7:15			<b>7:00</b> [1] 1:17			<b>additional</b> [1] 28:15			4:11 4:18 5:17			<b>best</b> [1] 38:17		
13:15 13:22 17:5			<b>7th</b> [1] 37:22			<b>address</b> [2] 22:10			5:18 5:19 6:5			<b>better</b> [1] 7:23		
<b>1,000</b> [2] 11:2						35:22			6:7 7:3 7:15			<b>between</b> [3] 2:14		
18:9						<b>addressed</b> [4] 9:12			7:17 7:18 11:17			11:12 27:11		
<b>1-07B</b> [7] 9:12						9:15 9:23 22:17			11:17 11:19 11:20			<b>big</b> [3] 15:9 34:8		
9:13 14:6 14:17						<b>adds</b> [1] 15:2			11:22 11:25 12:3			34:11		
14:21 14:24 15:4						<b>after</b> [6] 5:4 8:9			12:7 12:20 13:16			<b>bind</b> [1] 30:10		
<b>1-10</b> [2] 15:1 15:15						11:4 23:13 26:15			14:9 18:8 18:17			<b>binding</b> [1] 2:14		
<b>1.6</b> [1] 28:23						33:17			19:20 20:17 21:2			<b>biphenyls</b> [1] 17:17		
<b>10</b> [6] 6:13 16:2						<b>afterwards</b> [1] 8:2			21:16 25:9 25:10			<b>bit</b> [2] 4:3 29:22		
18:3 29:15 33:4						<b>again</b> [7] 7:14			25:15 25:19 27:13			<b>blew</b> [3] 12:2 12:25		
37:4						19:19 26:17 26:24			27:21 28:19 34:8			13:4		
<b>10,000</b> [4] 18:12						29:17 35:7 37:25			34:8 34:11 35:10			<b>blows</b> [1] 12:1		
18:13 21:23 23:1						<b>against</b> [2] 19:13			<b>areas</b> [2] 12:5 21:15			<b>board</b> [1] 28:23		
<b>10,000-gallon</b> [1] 12:15						20:8			<b>Argonne</b> [3] 2:24			<b>body</b> [1] 16:19		
<b>100</b> [5] 11:11 16:7			<b>abandoned</b> [1] 9:10			<b>agencies</b> [5] 3:1			4:12 35:16			<b>Boise</b> [2] 1:25		
16:13 37:5 37:6			<b>ability</b> [1] 38:17			3:4 3:12 7:6			<b>armor</b> [1] 8:25			35:7		
<b>12th</b> [1] 3:2			<b>above</b> [2] 18:15			33:23			<b>arrangement</b> [1] 31:20			<b>boss</b> [1] 6:8		
<b>15</b> [1] 33:5			20:18			<b>agency</b> [3] 2:16			<b>array</b> [1] 31:1			<b>bottle</b> [1] 14:3		
<b>18</b> [2] 1:9 37:15			<b>absolutely</b> [1] 23:17			4:25 6:13			<b>arsenic</b> [2] 17:10			<b>bottom</b> [5] 12:7		
<b>1950s</b> [1] 14:10			<b>acceptably</b> [7] 18:11			<b>agenda</b> [2] 4:17			17:13			13:4 28:3 32:19		
<b>1954</b> [1] 7:20			18:19 19:7 20:8			5:7			<b>aspect</b> [1] 31:21			33:2		
<b>1958</b> [1] 10:25			20:12 27:25 33:19			<b>ago</b> [4] 2:23 9:7			<b>assess</b> [1] 19:7			<b>break</b> [1] 34:23		
<b>1989</b> [1] 14:13			<b>acceptance</b> [3] 24:13			11:6 37:3			<b>assessed</b> [1] 16:11			<b>brief</b> [1] 7:15		
<b>1995</b> [1] 7:3			24:15 24:15			<b>agreement</b> [3] 2:13			<b>assesses</b> [1] 15:2			<b>briefly</b> [1] 22:14		
<b>1998</b> [4] 1:16 2:1			<b>accepting</b> [1] 7:9			2:14 4:14			<b>assessment</b> [19] 6:2			<b>bring</b> [1] 8:17		
<b>1999</b> [1] 1:9			<b>accepts</b> [1] 7:10			<b>ahead</b> [1] 34:21			9:24 9:25 13:18			<b>brought</b> [1] 8:21		
			<b>access</b> [3] 17:22			<b>Air</b> [1] 5:19			15:22 16:1 16:2			<b>building</b> [4] 7:21		
			25:5 25:23			<b>Aircraft</b> [2] 7:24			16:10 16:16 17:2			8:24 10:17 25:18		
			<b>accident</b> [1] 8:20			8:3			17:4 17:20 17:22			<b>buildings</b> [1] 27:11		
			<b>accomplished</b> [1] 25:6			<b>airplane</b> [3] 7:22			19:8 19:23 19:24			<b>builds</b> [1] 14:20		
						8:4 11:1			20:7 20:21 36:14			<b>built</b> [5] 8:4 8:5		
<b>-2-</b>			<b>acres</b> [2] 12:9 28:4			<b>alone</b> [1] 33:1			<b>assessments</b> [4] 13:13 13:23 15:20			8:11 8:24 8:25		
<b>2</b> [2] 12:14 13:22			<b>across</b> [3] 12:2			<b>along</b> [3] 17:17			36:16			<b>bulletin</b> [1] 30:22		
<b>20th</b> [1] 38:20			12:5 12:25			17:22 27:21			<b>associated</b> [6] 3:13			<b>Bureau</b> [1] 25:16		
<b>23</b> [2] 1:16 2:1			<b>action</b> [29] 9:19			<b>alternative</b> [14] 21:13			4:18 5:16 16:22			<b>buried</b> [1] 33:4		
<b>2421</b> [1] 1:24			11:6 12:4 13:25			22:4 23:11 26:15			21:4 23:8			<b>burn</b> [10] 10:15		
<b>25</b> [2] 33:7 37:4			14:1 14:5 14:12			26:23 27:1 27:3			<b>assume</b> [2] 14:23			10:20 10:22 10:22		
<b>28</b> [1] 39:1			15:5 15:6 15:16			27:15 27:22 32:6			18:23			17:12 19:4 21:25		
			15:17 20:22 21:6			32:22 33:8 33:12			<b>assuming</b> [2] 18:22			26:11 26:12 26:25		
			21:10 21:11 24:23			36:21			18:24			<b>burned</b> [1] 26:14		
			25:3 25:4 26:17			<b>alternatives</b> [15] 6:23 21:6 21:8			<b>assumption</b> [1] 18:23			<b>Burns</b> [2] 5:25		
			26:22 27:1 27:16			21:9 23:10 24:9			<b>attendance</b> [1] 5:11			13:14		
			28:13 28:25 29:18			26:6 31:8 31:9			<b>attention</b> [1] 4:8			<b>buys</b> [1] 7:10		
			29:21 29:22 33:24			33:11 33:14 33:19			<b>audience</b> [7] 6:6					
			38:19			36:14 36:20 37:9			34:7 34:15 34:24					
			<b>actions</b> [3] 14:2			<b>amazed</b> [1] 34:21			35:4 35:9 36:4					
			14:23 29:10			<b>amends</b> [1] 4:5								
<b>-4-</b>												<b>-C-</b>		
<b>400</b> [1] 19:10												<b>C</b> [2] 38:9 38:9		
<b>400-gallon</b> [1] 12:16														

calculate [2] 18:24 19:1	35:20 35:24 37:25	13:1 13:7 14:6	deals [2] 17:21 19:14	divided [1] 21:14
calculated [3] 18:7 18:8 18:22	commission [1] 32:17	14:7 14:8 15:4	dealt [2] 16:10 19:24	Division [1] 6:11
cancer [4] 17:24 18:4 18:13 19:25	community [2] 2:4 4:13	16:18 17:14 18:17	debris [2] 10:18	document [2] 15:8 15:9
cap [1] 25:21	Company [2] 6:1 6:4	21:18 21:24 25:5	decision [13] 3:5 3:24 3:24 5:14	documentation [1] 25:17
capital [1] 33:15	compare [3] 23:11 24:2 24:9	25:8 25:13 25:23	9:13 14:24 15:12	DOE [3] 6:19 18:22 18:24
carbon [1] 13:2	compared [2] 19:12 20:7	26:9 27:18 27:19	15:14 15:15 33:19	done [6] 12:4 20:2 28:7 29:3 31:17 38:16
care [1] 31:12	comparison [1] 19:8	30:10 31:2 33:2	33:20 33:22 35:23	Doug [4] 5:24 13:11 21:2 28:6
carried [1] 16:1	complete [2] 36:12 36:13	contents [11] 11:23 12:24 22:11 29:24	decisions [1] 7:11	down [11] 8:9 8:17 11:7 12:8
case [1] 36:21	completed [3] 2:12 33:21 33:22	30:4 30:23 31:5	decontamination [2] 23:5 23:8	12:13 14:11 14:16
catalogued [1] 37:1	comply [1] 23:21	31:12 32:4 32:11	deed [1] 25:14	18:18 23:6 31:22 38:12
categories [1] 10:10	comprehensive [13] 1:6 2:7 2:11	32:14	Department [5] 2:15 5:20 6:10 7:14	drop [1] 25:1
caused [1] 31:23	2:17 2:25 3:10	control [3] 25:5 25:9 28:24	25:15	dropped [1] 29:20
certain [2] 21:13 24:1	4:19 4:22 6:2	controlling [1] 25:15	depicts [1] 16:15	dry [2] 32:17 32:18
certainly [2] 9:4 36:22	6:6 14:22 15:7 37:16	cool [1] 8:15	Desert [1] 7:25	dug [1] 11:7
certify [2] 38:11 38:18	computer [1] 38:14	cools [1] 31:5	design [2] 15:16	during [4] 5:1 17:25 23:2 23:4
cesium [2] 21:22 28:6	concentrations [2] 19:13 30:16	cooperatively [1] 7:5	detail [2] 9:23 36:17	dust [1] 16:20
cesium-137 [3] 12:6 12:10 17:6	concern [1] 17:3	coordinator [1] 2:4	detected [1] 19:12	-E-
chance [2] 18:3 18:12	concerned [1] 10:23	copies [1] 5:14	determinations [4] 13:25 14:1 15:6 15:18	earth [2] 13:5 32:19
Chemical [1] 37:18	concluded [1] 38:5	copy [2] 15:8 35:22	determine [1] 30:20	easier [1] 24:7
chemicals [1] 17:15	concrete [2] 25:12 30:9	cores [2] 8:16 8:17	determined [1] 20:9	easy [1] 24:6
choose [1] 21:25	conducted [2] 14:13 14:13	corner [1] 12:9	develop [2] 21:10 33:18	eco [2] 9:25 10:2
chosen [2] 36:22 37:10	conducting [1] 6:1	correct [1] 38:16	developed [1] 31:24	ecological [6] 9:18 9:22 9:24 15:23 15:25 16:2
Citizens' [1] 4:10	connecting [1] 11:11	correlated [1] 17:16	developing [3] 17:24 18:4 18:13	effect [3] 10:3 30:16 30:20
clarification [1] 34:4	Consent [2] 2:13 4:15	cost [4] 28:22 29:2 33:13 33:15	diagram [1] 16:22	effective [1] 24:5
clean [1] 23:2	conservative [1] 19:2	cost-wise [1] 36:25	diameter [1] 33:5	effects [3] 8:15 10:4 20:4
clean-up [1] 2:14	consider [1] 32:18	costs [1] 24:8	diatomaceous [2] 13:4 32:19	eight [4] 9:16 9:21 10:7 10:9
cleaned [2] 11:4 14:4	consisted [1] 14:14	county [2] 36:9 38:7	diesel [7] 11:9 11:9 11:14 17:14 17:14 19:4 27:9	Eisenhower [1] 7:20
clear [1] 5:2	construction [2] 10:18 26:14	couple [3] 5:23 5:24 17:6	different [18] 16:4 20:3 21:15 22:23 23:9 24:3 24:10	either [4] 29:24 29:25 30:6 36:25
clearly [1] 35:21	contain [1] 25:22	course [3] 2:19 17:11 18:25	24:22 26:16 29:9	electrodes [4] 31:1 31:1 31:3 31:20
closely [1] 6:18	containment [2] 25:20 25:20	court [2] 4:1 4:5	29:13 29:15 31:7	emphasis [1] 8:10
Clyde [3] 6:9 6:10 7:8	contains [1] 38:15	covered [2] 36:15 36:15	31:19 31:20 35:11	encourage [1] 35:18
co-located [3] 22:14 22:15 22:23	contaminant [3] 10:23 20:10 20:11	create [1] 26:17	35:13 36:15	encouraging [2] 3:14 5:8
cocktail [1] 12:17	contaminants [6] 17:2 17:3 19:5 19:6 20:3 20:4	created [1] 31:3	dig [3] 26:1 27:23 29:1	end [2] 10:21 29:14
Cody [2] 6:10 6:17	contaminated [26] 10:10 10:11 11:20 11:24 12:10 14:14 16:7 16:12 16:20 16:20 16:25 18:1 20:8 21:19 24:18 24:20 24:20 25:24 26:1 26:5 26:8 27:5 28:5 30:14 30:15 32:12	criteria [17] 23:12 23:13 23:15 23:16 23:17 23:17 23:23 23:25 23:25 24:2 24:3 24:10 24:12 24:12 24:25 25:2 29:19	direct [2] 4:7 22:1	ended [1] 9:5
Cold [2] 2:10 7:19	combined [1] 10:5	cumulative [1] 10:4	direction [1] 12:1	Energy [4] 2:15 5:20 7:14 25:15
combined [1] 10:5	coming [2] 37:24 38:3	current [2] 16:6 31:2	discover [1] 28:17	Engine [1] 8:7
comment [10] 3:1 5:5 7:9 34:22 35:21 36:2 37:12 37:14 37:25 38:2	comment [10] 3:1 5:5 7:9 34:22 35:21 36:2 37:12 37:14 37:25 38:2	-D-	discussed [2] 29:22 33:10	engineered [1] 25:21
comments [16] 3:16 3:17 3:18 3:20 3:22 5:5 5:10 6:25 15:12 15:14 33:17 33:18 35:19	contamination [34] 7:8 11:5 11:14 11:18 12:3 12:20	data [1] 19:6	discussing [1] 2:23	ENGINEERING [1] 1:1
		dates [1] 37:21	disposal [7] 17:7 17:13 18:17 19:19 20:16 25:25 28:2	engines [2] 8:8 11:2
		Dave [3] 6:3 10:13	dispose [6] 26:2 27:6 27:24 29:1 30:5 32:13	entered [1] 5:6
		Dave's [1] 6:8	disposing [1] 29:25	entire [1] 10:1
		days [1] 7:19		
		deal [1] 37:19		

<b>environment</b> [6] 9:6 16:18 22:12 22:21 23:7 23:19	<b>fed</b> [1] 15:6 <b>federal</b> [3] 2:12 4:14 23:22	18:14 19:15 <b>graphite</b> [1] 30:25 <b>great</b> [1] 37:19 <b>greater</b> [3] 20:15 23:1 23:4	<b>hypothetical</b> [1] 16:10 <hr/> <b>-I-</b> <hr/> <b>Idaho</b> [16] 1:1 1:17 1:17 1:25 2:1 2:1 2:16 2:22 5:25 6:10 12:1 37:18 37:22 38:6 38:10 38:24	<b>investigation</b> [15] 2:25 3:13 3:15 4:19 5:21 6:3 6:6 6:15 7:16 9:7 13:23 14:19 14:22 15:1 16:3 <b>Investigation/Feasibility</b> [7] 1:7 2:8 2:11 3:11 15:7 15:21 37:17
<b>environmental</b> [5] 1:2 2:5 2:15 6:11 6:13	<b>feeds</b> [1] 15:11 <b>feels</b> [1] 6:17 <b>feet</b> [4] 11:7 11:11 33:4 33:7	<b>Green</b> [1] 6:7 <b>ground</b> [2] 33:4 33:7 <b>groundwater</b> [6] 9:14 14:6 14:6 14:7 14:16 14:21	<b>ideas</b> [1] 6:22 <b>identified</b> [5] 9:11 13:16 14:24 17:2 18:10 <b>IET</b> [1] 8:6 <b>imagine</b> [1] 18:2 <b>immediately</b> [2] 25:1 29:20	<b>investigations</b> [7] 2:17 13:15 13:21 13:22 13:24 14:21 15:2 <b>involved</b> [3] 5:21 6:14 36:8 <b>Island</b> [1] 8:20
<b>EPA</b> [6] 4:19 6:19 7:2 18:10 20:2 20:9	<b>fence</b> [3] 25:7 25:9 27:12 <b>fencing</b> [1] 26:18 <b>few</b> [3] 4:20 4:21 11:6	<b>group</b> [10] 5:17 5:18 5:19 6:8 7:15 23:23 24:11 24:17 26:7 29:6	<b>importantly</b> [1] 6:20 <b>impressions</b> [1] 5:9 <b>inception</b> [1] 7:5 <b>inch</b> [2] 13:3 32:18 <b>including</b> [2] 17:10 18:15	<b>investigation/Feasibility</b> [7] 1:7 2:8 2:11 3:11 15:7 15:21 37:17
<b>equal</b> [3] 20:12 20:14 20:19	<b>fill</b> [4] 32:23 32:25 32:25 33:8 <b>final</b> [2] 1:9 19:22 <b>first</b> [25] 3:9 10:10 10:12 11:16 13:20 14:12 16:4 17:5 17:20 19:24 21:9 21:16 21:18 23:14 24:13 24:17 24:25 26:7 26:10 27:20 29:8 29:18 31:9 34:23 35:6	<b>grouped</b> [1] 10:9 <b>grout</b> [3] 30:9 30:21 32:24 <b>grout-like</b> [1] 30:9 <b>grouting</b> [3] 30:8 30:17 32:9	<b>immediately</b> [2] 25:1 29:20 <b>impact</b> [1] 9:25 <b>impacts</b> [1] 20:6 <b>implement</b> [2] 24:7 24:8 <b>importantly</b> [1] 6:20 <b>impressions</b> [1] 5:9 <b>inception</b> [1] 7:5 <b>inch</b> [2] 13:3 32:18 <b>including</b> [2] 17:10 18:15	<b>investigations</b> [7] 2:17 13:15 13:21 13:22 13:24 14:21 15:2 <b>involved</b> [3] 5:21 6:14 36:8 <b>Island</b> [1] 8:20
<b>erect</b> [1] 26:18 <b>Erik</b> [3] 2:3 7:18 34:1	<b>flowing</b> [2] 25:10 26:19 <b>Fluid</b> [1] 8:14 <b>fold</b> [1] 3:20 <b>followed</b> [1] 13:18 <b>Following</b> [1] 4:23 <b>foot</b> [1] 33:5 <b>force</b> [1] 37:2 <b>foregoing</b> [1] 38:15 <b>form</b> [3] 5:8 37:25 38:2	<b>guys</b> [2] 7:12 36:5 <hr/> <b>-H-</b> <hr/> <b>H</b> [1] 38:9 <b>half</b> [3] 3:3 5:22 9:7 <b>hand</b> [2] 36:23 38:20 <b>hanger</b> [4] 8:4 8:13 8:24 8:25 <b>hard</b> [1] 37:7 <b>hazard</b> [4] 20:13 20:15 22:4 23:3 <b>hazardous</b> [1] 12:18 <b>health</b> [11] 6:11 9:17 9:22 10:8 15:23 15:25 16:3 19:24 20:4 20:6 23:18	<b>immediately</b> [2] 25:1 29:20 <b>impact</b> [1] 9:25 <b>impacts</b> [1] 20:6 <b>implement</b> [2] 24:7 24:8 <b>importantly</b> [1] 6:20 <b>impressions</b> [1] 5:9 <b>inception</b> [1] 7:5 <b>inch</b> [2] 13:3 32:18 <b>including</b> [2] 17:10 18:15 <b>incorporate</b> [1] 33:18 <b>indicates</b> [1] 29:3 <b>indication</b> [1] 22:8 <b>indications</b> [2] 28:8 28:9 <b>individual</b> [1] 16:24 <b>INEEL</b> [7] 2:4 14:13 27:7 27:24 29:1 34:16 34:18 <b>inert</b> [2] 32:24 33:9 <b>information</b> [2] 15:10 20:22 <b>ingest</b> [1] 16:20 <b>inhale</b> [1] 16:19 <b>Initial</b> [1] 8:7 <b>injected</b> [1] 14:10 <b>injection</b> [5] 14:8 14:9 14:11 14:15 14:17 <b>input</b> [1] 6:21 <b>inside</b> [2] 8:25 27:11 <b>instance</b> [1] 16:19 <b>instrumental</b> [1] 6:1 <b>intake</b> [1] 20:5 <b>interest</b> [3] 36:6 37:19 38:19 <b>interesting</b> [2] 8:23 12:17 <b>Interim</b> [1] 14:5 <b>interrupt</b> [1] 5:3 <b>introduce</b> [3] 4:17 5:15 6:9	<b>investigation</b> [15] 2:25 3:13 3:15 4:19 5:21 6:3 6:6 6:15 7:16 9:7 13:23 14:19 14:22 15:1 16:3 <b>Investigation/Feasibility</b> [7] 1:7 2:8 2:11 3:11 15:7 15:21 37:17
<b>evaluation</b> [7] 5:8 15:23 15:24 15:25 23:12 23:13 28:10	<b>five</b> [7] 2:17 2:20 12:5 12:9 26:21 28:4 29:11	<b>grouted</b> [1] 10:9 <b>grout</b> [3] 30:9 30:21 32:24 <b>grout-like</b> [1] 30:9 <b>grouting</b> [3] 30:8 30:17 32:9	<b>immediately</b> [2] 25:1 29:20 <b>impact</b> [1] 9:25 <b>impacts</b> [1] 20:6 <b>implement</b> [2] 24:7 24:8 <b>importantly</b> [1] 6:20 <b>impressions</b> [1] 5:9 <b>inception</b> [1] 7:5 <b>inch</b> [2] 13:3 32:18 <b>including</b> [2] 17:10 18:15	<b>investigations</b> [7] 2:17 13:15 13:21 13:22 13:24 14:21 15:2 <b>involved</b> [3] 5:21 6:14 36:8 <b>Island</b> [1] 8:20
<b>event</b> [1] 38:19 <b>example</b> [1] 19:9 <b>excavate</b> [3] 27:4 27:23 28:20 <b>excavation</b> [3] 25:25 29:23 30:3 <b>exciting</b> [1] 10:16 <b>experiments</b> [2] 8:16 20:2	<b>flower</b> [1] 8:6 <b>forward</b> [3] 6:21 6:25 16:1 <b>found</b> [2] 7:5 20:3 <b>four</b> [2] 11:7 14:2 <b>fourth</b> [1] 2:10 <b>free</b> [3] 5:2 32:21 37:24 <b>fuel</b> [2] 8:20 19:4 <b>future</b> [6] 5:11 16:8 22:19 28:14 33:17 37:1	<b>guess</b> [3] 34:21 36:13 37:13 <b>Guides</b> [1] 4:10 <b>guys</b> [2] 7:12 36:5 <hr/> <b>-H-</b> <hr/> <b>H</b> [1] 38:9 <b>half</b> [3] 3:3 5:22 9:7 <b>hand</b> [2] 36:23 38:20 <b>hanger</b> [4] 8:4 8:13 8:24 8:25 <b>hard</b> [1] 37:7 <b>hazard</b> [4] 20:13 20:15 22:4 23:3 <b>hazardous</b> [1] 12:18 <b>health</b> [11] 6:11 9:17 9:22 10:8 15:23 15:25 16:3 19:24 20:4 20:6 23:18	<b>immediately</b> [2] 25:1 29:20 <b>impact</b> [1] 9:25 <b>impacts</b> [1] 20:6 <b>implement</b> [2] 24:7 24:8 <b>importantly</b> [1] 6:20 <b>impressions</b> [1] 5:9 <b>inception</b> [1] 7:5 <b>inch</b> [2] 13:3 32:18 <b>including</b> [2] 17:10 18:15 <b>incorporate</b> [1] 33:18 <b>indicates</b> [1] 29:3 <b>indication</b> [1] 22:8 <b>indications</b> [2] 28:8 28:9 <b>individual</b> [1] 16:24 <b>INEEL</b> [7] 2:4 14:13 27:7 27:24 29:1 34:16 34:18 <b>inert</b> [2] 32:24 33:9 <b>information</b> [2] 15:10 20:22 <b>ingest</b> [1] 16:20 <b>inhale</b> [1] 16:19 <b>Initial</b> [1] 8:7 <b>injected</b> [1] 14:10 <b>injection</b> [5] 14:8 14:9 14:11 14:15 14:17 <b>input</b> [1] 6:21 <b>inside</b> [2] 8:25 27:11 <b>instance</b> [1] 16:19 <b>instrumental</b> [1] 6:1 <b>intake</b> [1] 20:5 <b>interest</b> [3] 36:6 37:19 38:19 <b>interesting</b> [2] 8:23 12:17 <b>Interim</b> [1] 14:5 <b>interrupt</b> [1] 5:3 <b>introduce</b> [3] 4:17 5:15 6:9	<b>investigation</b> [15] 2:25 3:13 3:15 4:19 5:21 6:3 6:6 6:15 7:16 9:7 13:23 14:19 14:22 15:1 16:3 <b>Investigation/Feasibility</b> [7] 1:7 2:8 2:11 3:11 15:7 15:21 37:17
<b>evaluated</b> [3] 16:5 16:16 16:22	<b>gallons</b> [1] 11:3 <b>garage</b> [1] 8:6 <b>classified</b> [1] 31:6 <b>goals</b> [1] 21:11 <b>good</b> [3] 6:18 7:7 7:22 <b>gradient</b> [1] 14:16 <b>graph</b> [3] 18:6	<b>grouped</b> [1] 10:9 <b>grout</b> [3] 30:9 30:21 32:24 <b>grout-like</b> [1] 30:9 <b>grouting</b> [3] 30:8 30:17 32:9	<b>immediately</b> [2] 25:1 29:20 <b>impact</b> [1] 9:25 <b>impacts</b> [1] 20:6 <b>implement</b> [2] 24:7 24:8 <b>importantly</b> [1] 6:20 <b>impressions</b> [1] 5:9 <b>inception</b> [1] 7:5 <b>inch</b> [2] 13:3 32:18 <b>including</b> [2] 17:10 18:15 <b>incorporate</b> [1] 33:18 <b>indicates</b> [1] 29:3 <b>indication</b> [1] 22:8 <b>indications</b> [2] 28:8 28:9 <b>individual</b> [1] 16:24 <b>INEEL</b> [7] 2:4 14:13 27:7 27:24 29:1 34:16 34:18 <b>inert</b> [2] 32:24 33:9 <b>information</b> [2] 15:10 20:22 <b>ingest</b> [1] 16:20 <b>inhale</b> [1] 16:19 <b>Initial</b> [1] 8:7 <b>injected</b> [1] 14:10 <b>injection</b> [5] 14:8 14:9 14:11 14:15 14:17 <b>input</b> [1] 6:21 <b>inside</b> [2] 8:25 27:11 <b>instance</b> [1] 16:19 <b>instrumental</b> [1] 6:1 <b>intake</b> [1] 20:5 <b>interest</b> [3] 36:6 37:19 38:19 <b>interesting</b> [2] 8:23 12:17 <b>Interim</b> [1] 14:5 <b>interrupt</b> [1] 5:3 <b>introduce</b> [3] 4:17 5:15 6:9	<b>investigation</b> [15] 2:25 3:13 3:15 4:19 5:21 6:3 6:6 6:15 7:16 9:7 13:23 14:19 14:22 15:1 16:3 <b>Investigation/Feasibility</b> [7] 1:7 2:8 2:11 3:11 15:7 15:21 37:17
<b>evaluation</b> [7] 5:8 15:23 15:24 15:25 23:12 23:13 28:10	<b>flowing</b> [2] 25:10 26:19 <b>Fluid</b> [1] 8:14 <b>fold</b> [1] 3:20 <b>followed</b> [1] 13:18 <b>Following</b> [1] 4:23 <b>foot</b> [1] 33:5 <b>force</b> [1] 37:2 <b>foregoing</b> [1] 38:15 <b>form</b> [3] 5:8 37:25 38:2	<b>guys</b> [2] 7:12 36:5 <hr/> <b>-H-</b> <hr/> <b>H</b> [1] 38:9 <b>half</b> [3] 3:3 5:22 9:7 <b>hand</b> [2] 36:23 38:20 <b>hanger</b> [4] 8:4 8:13 8:24 8:25 <b>hard</b> [1] 37:7 <b>hazard</b> [4] 20:13 20:15 22:4 23:3 <b>hazardous</b> [1] 12:18 <b>health</b> [11] 6:11 9:17 9:22 10:8 15:23 15:25 16:3 19:24 20:4 20:6 23:18	<b>immediately</b> [2] 25:1 29:20 <b>impact</b> [1] 9:25 <b>impacts</b> [1] 20:6 <b>implement</b> [2] 24:7 24:8 <b>importantly</b> [1] 6:20 <b>impressions</b> [1] 5:9 <b>inception</b> [1] 7:5 <b>inch</b> [2] 13:3 32:18 <b>including</b> [2] 17:10 18:15 <b>incorporate</b> [1] 33:18 <b>indicates</b> [1] 29:3 <b>indication</b> [1] 22:8 <b>indications</b> [2] 28:8 28:9 <b>individual</b> [1] 16:24 <b>INEEL</b> [7] 2:4 14:13 27:7 27:24 29:1 34:16 34:18 <b>inert</b> [2] 32:24 33:9 <b>information</b> [2] 15:10 20:22 <b>ingest</b> [1] 16:20 <b>inhale</b> [1] 16:19 <b>Initial</b> [1] 8:7 <b>injected</b> [1] 14:10 <b>injection</b> [5] 14:8 14:9 14:11 14:15 14:17 <b>input</b> [1] 6:21 <b>inside</b> [2] 8:25 27:11 <b>instance</b> [1] 16:19 <b>instrumental</b> [1] 6:1 <b>intake</b> [1] 20:5 <b>interest</b> [3] 36:6 37:19 38:19 <b>interesting</b> [2] 8:23 12:17 <b>Interim</b> [1] 14:5 <b>interrupt</b> [1] 5:3 <b>introduce</b> [3] 4:17 5:15 6:9	<b>investigation</b> [15] 2:25 3:13 3:15 4:19 5:21 6:3 6:6 6:15 7:16 9:7 13:23 14:19 14:22 15:1 16:3 <b>Investigation/Feasibility</b> [7] 1:7 2:8 2:11 3:11 15:7 15:21 37:17
<b>event</b> [1] 38:19 <b>example</b> [1] 19:9 <b>excavate</b> [3] 27:4 27:23 28:20 <b>excavation</b> [3] 25:25 29:23 30:3 <b>exciting</b> [1] 10:16 <b>experiments</b> [2] 8:16 20:2	<b>flower</b> [1] 8:6 <b>forward</b> [3] 6:21 6:25 16:1 <b>found</b> [2] 7:5 20:3 <b>four</b> [2] 11:7 14:2 <b>fourth</b> [1] 2:10 <b>free</b> [3] 5:2 32:21 37:24 <b>fuel</b> [2] 8:20 19:4 <b>future</b> [6] 5:11 16:8 22:19 28:14 33:17 37:1	<b>guess</b> [3] 34:21 36:13 37:13 <b>Guides</b> [1] 4:10 <b>guys</b> [2] 7:12 36:5 <hr/> <b>-H-</b> <hr/> <b>H</b> [1] 38:9 <b>half</b> [3] 3:3 5:22 9:7 <b>hand</b> [2] 36:23 38:20 <b>hanger</b> [4] 8:4 8:13 8:24 8:25 <b>hard</b> [1] 37:7 <b>hazard</b> [4] 20:13 20:15 22:4 23:3 <b>hazardous</b> [1] 12:18 <b>health</b> [11] 6:11 9:17 9:22 10:8 15:23 15:25 16:3 19:24 20:4 20:6 23:18	<b>immediately</b> [2] 25:1 29:20 <b>impact</b> [1] 9:25 <b>impacts</b> [1] 20:6 <b>implement</b> [2] 24:7 24:8 <b>importantly</b> [1] 6:20 <b>impressions</b> [1] 5:9 <b>inception</b> [1] 7:5 <b>inch</b> [2] 13:3 32:18 <b>including</b> [2] 17:10 18:15 <b>incorporate</b> [1] 33:18 <b>indicates</b> [1] 29:3 <b>indication</b> [1] 22:8 <b>indications</b> [2] 28:8 28:9 <b>individual</b> [1] 16:24 <b>INEEL</b> [7] 2:4 14:13 27:7 27:24 29:1 34:16 34:18 <b>inert</b> [2] 32:24 33:9 <b>information</b> [2] 15:10 20:22 <b>ingest</b> [1] 16:20 <b>inhale</b> [1] 16:19 <b>Initial</b> [1] 8:7 <b>injected</b> [1] 14:10 <b>injection</b> [5] 14:8 14:9 14:11 14:15 14:17 <b>input</b> [1] 6:21 <b>inside</b> [2] 8:25 27:11 <b>instance</b> [1] 16:19 <b>instrumental</b> [1] 6:1 <b>intake</b> [1] 20:5 <b>interest</b> [3] 36:6 37:19 38:19 <b>interesting</b> [2] 8:23 12:17 <b>Interim</b> [1] 14:5 <b>interrupt</b> [1] 5:3 <b>introduce</b> [3] 4:17 5:15 6:9	<b>investigation</b> [15] 2:25 3:13 3:15 4:19 5:21 6:3 6:6 6:15 7:16 9:7 13:23 14:19 14:22 15:1 16:3 <b>Investigation/Feasibility</b> [7] 1:7 2:8 2:11 3:11 15:7 15:21 37:17
<b>evaluated</b> [3] 16:5 16:16 16:22	<b>gallons</b> [1] 11:3 <b>garage</b> [1] 8:6 <b>classified</b> [1] 31:6 <b>goals</b> [1] 21:11 <b>good</b> [3] 6:18 7:7 7:22 <b>gradient</b> [1] 14:16 <b>graph</b> [3] 18:6	<b>grouped</b> [1] 10:9 <b>grout</b> [3] 30:9 30:21 32:24 <b>grout-like</b> [1] 30:9 <b>grouting</b> [3] 30:8 30:17 32:9	<b>immediately</b> [2] 25:1 29:20 <b>impact</b> [1] 9:25 <b>impacts</b> [1] 20:6 <b>implement</b> [2] 24:7 24:8 <b>importantly</b> [1] 6:20 <b>impressions</b> [1] 5:9 <b>inception</b> [1] 7:5 <b>inch</b> [2] 13:3 32:18 <b>including</b> [2] 17:10 18:15 <b>incorporate</b> [1] 33:18 <b>indicates</b> [1] 29:3 <b>indication</b> [1] 22:8 <b>indications</b> [2] 28:8 28:9 <b>individual</b> [1] 16:24 <b>INEEL</b> [7] 2:4 14:13 27:7 27:24 29:1 34:16 34:18 <b>inert</b> [2] 32:24 33:9 <b>information</b> [2] 15:10 20:22 <b>ingest</b> [1] 16:20 <b>inhale</b> [1] 16:19 <b>Initial</b> [1] 8:7 <b>injected</b> [1] 14:10 <b>injection</b> [5] 14:8 14:9 14:11 14:15 14:17 <b>input</b> [1] 6:21 <b>inside</b> [2] 8:25 27:11 <b>instance</b> [1] 16:19 <b>instrumental</b> [1] 6:1 <b>intake</b> [1] 20:5 <b>interest</b> [3] 36:6 37:19 38:19 <b>interesting</b> [2] 8:23 12:17 <b>Interim</b> [1] 14:5 <b>interrupt</b> [1] 5:3 <b>introduce</b> [3] 4:17 5:15 6:9	<b>investigation</b> [15] 2:25 3:13 3:15 4:19 5:21 6:3 6:6 6:15 7:16 9:7 13:23 14:19 14:22 15:1 16:3 <b>Investigation/Feasibility</b> [7] 1:7 2:8 2:11 3:11 15:7 15:21 37:17
<b>evaluation</b> [7] 5:8 15:23 15:24 15:25 23:12 23:13 28:10	<b>flowing</b> [2] 25:10 26:19 <b>Fluid</b> [1] 8:14 <b>fold</b> [1] 3:20 <b>followed</b> [1] 13:18 <b>Following</b> [1] 4:23 <b>foot</b> [1] 33:5 <b>force</b> [1] 37:2 <b>foregoing</b> [1] 38:15 <b>form</b> [3] 5:8 37:25 38:2	<b>guys</b> [2] 7:12 36:5 <hr/> <b>-H-</b> <hr/> <b>H</b> [1] 38:9 <b>half</b> [3] 3:3 5:22 9:7 <b>hand</b> [2] 36:23 38:20 <b>hanger</b> [4] 8:4 8:13 8:24 8:25 <b>hard</b> [1] 37:7 <b>hazard</b> [4] 20:13 20:15 22:4 23:3 <b>hazardous</b> [1] 12:18 <b>health</b> [11] 6:11 9:17 9:22 10:8 15:23 15:25 16:3 19:24 20:4 20:6 23:18	<b>immediately</b> [2] 25:1 29:20 <b>impact</b> [1] 9:25 <b>impacts</b> [1] 20:6 <b>implement</b> [2] 24:7 24:8 <b>importantly</b> [1] 6:20 <b>impressions</b> [1] 5:9 <b>inception</b> [1] 7:5 <b>inch</b> [2] 13:3 32:18 <b>including</b> [2] 17:10 18:15 <b>incorporate</b> [1] 33:18 <b>indicates</b> [1] 29:3 <b>indication</b> [1] 22:8 <b>indications</b> [2] 28:8 28:9 <b>individual</b> [1] 16:24 <b>INEEL</b> [7] 2:4 14:13 27:7 27:24 29:1 34:16 34:18 <b>inert</b> [2] 32:24 33:9 <b>information</b> [2] 15:10 20:22 <b>ingest</b> [1] 16:20 <b>inhale</b> [1] 16:19 <b>Initial</b> [1] 8:7 <b>injected</b> [1] 14:10 <b>injection</b> [5] 14:8 14:9 14:11 14:15 14:17 <b>input</b> [1] 6:21 <b>inside</b> [2] 8:25 27:11 <b>instance</b> [1] 16:19 <b>instrumental</b> [1] 6:1 <b>intake</b> [1] 20:5 <b>interest</b> [3] 36:6 37:19 38:19 <b>interesting</b> [2] 8:23 12:17 <b>Interim</b> [1] 14:5 <b>interrupt</b> [1] 5:3 <b>introduce</b> [3] 4:17 5:15 6:9	<b>investigation</b> [15] 2:25 3:13 3:15 4:19 5:21 6:3 6:6 6:15 7:16 9:7 13:23 14:19 14:22 15:1 16:3 <b>Investigation/Feasibility</b> [7] 1:7 2:8 2:11 3:11 15:7 15:21 37:17
<b>event</b> [1] 38:19 <b>example</b> [1] 19:9 <b>excavate</b> [3] 27:4 27:23 28:20 <b>excavation</b> [3] 25:25 29:23 30:3 <b>exciting</b> [1] 10:16 <b>experiments</b> [2] 8:16 20:2	<b>flower</b> [1] 8:6 <b>forward</b> [3] 6:21 6:25 16:1 <b>found</b> [2] 7:5 20:3 <b>four</b> [2] 11:7 14:2 <b>fourth</b> [1] 2:10 <b>free</b> [3] 5:2 32:21 37:24 <b>fuel</b> [2] 8:20 19:4 <b>future</b> [6] 5:11 16:8 22:19 28:14 33:17 37:1	<b>guess</b> [3] 34:21 36:13 37:13 <b>Guides</b> [1] 4:10 <b>guys</b> [2] 7:12 36:5 <hr/> <b>-H-</b> <hr/> <b>H</b> [1] 38:9 <b>half</b> [3] 3:3 5:22 9:7 <b>hand</b> [2] 36:23 38:20 <b>hanger</b> [4] 8:4 8:13 8:24 8:25 <b>hard</b> [1] 37:7 <b>hazard</b> [4] 20:13 20:15 22:4 23:3 <b>hazardous</b> [1] 12:18 <b>health</b> [11] 6:11 9:17 9:22 10:8 15:23 15:25 16:3 19:24 20:4 20:6		

**Nancy Schwartz Reporting (208) 345-2773**



<b>potential</b> [3] 9:10 13:16 17:4	<b>public</b> [14] 1:2 2:21 3:1 5:11 6:21 6:23 7:9 7:10 15:13 34:22 36:2 37:16 38:10 38:23	<b>record</b> [13] 3:23 3:24 5:6 5:14 9:12 14:24 15:14 15:15 33:18 33:20 33:22 35:23 38:16	19:11 19:11 19:15 19:17	<b>residual</b> [3] 11:8 11:14 15:4	<b>scheduled</b> [1] 3:25 <b>Schwartz</b> [2] 1:24 38:23
<b>powered</b> [1] 7:21	<b>public's</b> [1] 24:15	<b>recording</b> [1] 4:2	<b>resource</b> [1] 4:8	<b>respect</b> [1] 34:13	<b>screen</b> [1] 11:19
<b>practices</b> [1] 9:4	<b>pulling</b> [1] 14:14	<b>Records</b> [1] 3:4	<b>responded</b> [1] 3:22	<b>response</b> [2] 29:10 34:25	<b>seal</b> [1] 38:20
<b>predicts</b> [1] 17:4	<b>pumped</b> [2] 13:3 32:17	<b>reduce</b> [1] 21:21	<b>responsiveness</b> [1] 3:23	<b>rest</b> [1] 34:25	<b>Seattle</b> [2] 6:14 7:2
<b>preferred</b> [14] 6:23 21:7 26:6 26:15 26:23 27:1 27:3 27:15 27:22 31:8 32:5 32:22 33:8 33:12	<b>purpose</b> [1] 3:8	<b>reduced</b> [1] 38:14	<b>restoration</b> [1] 2:5	<b>restrictions</b> [1] 25:14	<b>second</b> [7] 3:12 4:16 16:9 23:20 25:2 26:24 29:9
<b>preliminary</b> [3] 13:21 13:22 13:24	<b>put</b> [6] 10:20 25:11 28:22 30:8 32:16 32:20	<b>reducing</b> [1] 17:5	<b>result</b> [5] 13:15 17:1 17:25 18:4 25:13	<b>RI/FS</b> [2] 15:10 34:6	<b>section</b> [1] 3:23
<b>present</b> [5] 3:10 20:21 20:24 21:7 26:6	<b>putting</b> [1] 30:25	<b>referring</b> [1] 35:2	<b>results</b> [4] 3:10 17:20 17:21 19:23	<b>review</b> [1] 4:17	<b>see</b> [11] 2:9 6:23 8:1 16:14 18:14 18:18 26:21 29:12 29:17 30:22 33:13
<b>presentation</b> [4] 2:9 5:1 21:3 34:4	<b>Quality</b> [1] 6:12	<b>relations</b> [2] 2:4 4:14	<b>right</b> [12] 8:13 11:4 14:18 18:5 18:11 20:13 27:21 28:13 30:12 30:17 34:15 36:22	<b>risk</b> [42] 6:2 9:17 9:18 9:22 9:24 9:25 10:8 13:13 13:23 15:3 15:20 15:22 16:1 16:2 16:5 16:6 16:9 16:16 16:24 17:20 17:22 17:23 17:23 18:5 18:7 18:8 18:11 18:14 18:19 19:1 19:9 19:18 19:21 19:22 19:25 19:25 20:7 20:20 21:3 21:22 21:22 23:1	<b>send</b> [3] 5:13 35:22 37:24
<b>presentations</b> [1] 4:22	<b>questions</b> [5] 3:14 4:24 34:3 34:20 35:17	<b>release</b> [7] 9:10 13:16 13:19 13:24 22:11 23:7 34:13	<b>release</b> [2] 9:5 22:20	<b>remains</b> [1] 37:14	<b>September</b> [1] 39:1
<b>presented</b> [2] 21:3 33:12	<b>quit</b> [1] 25:15	<b>releasing</b> [1] 2:18	<b>remedial</b> [18] 1:6 2:8 2:11 14:17 14:22 14:23 15:7 15:16 15:16 15:21 20:22 20:23 21:6 21:10 21:11 33:24 33:24 37:17	<b>remediation</b> [3] 3:6 3:11 28:22	<b>session</b> [4] 4:24 5:4 5:5 34:22
<b>president</b> [2] 7:20 7:22	<b>quite</b> [2] 29:22 31:17	<b>remaining</b> [4] 9:16 9:18 11:8 13:5	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>remedy</b> [9] 21:13 22:9 23:19 23:20 24:1 25:4 25:23 26:22 31:14	<b>several</b> [5] 17:9 18:15 19:17 21:15 37:2
<b>pretty</b> [2] 37:8 37:10	<b>quotient</b> [5] 20:14 20:15 20:19 22:4 23:4	<b>remains</b> [1] 37:14	<b>remember</b> [4] 8:19 24:19 28:3 32:15	<b>remind</b> [1] 37:14	<b>shape</b> [1] 5:10
<b>prevent</b> [4] 22:1 25:18 25:23 26:18	<b>rad</b> [4] 10:11 11:15 12:6 12:18	<b>remediation</b> [3] 3:6 3:11 28:22	<b>removal</b> [4] 11:6 12:4 14:2 14:12	<b>remove</b> [4] 26:3 27:23 28:21 32:12	<b>Shaw</b> [8] 5:17 5:23 7:13 7:18 34:10 34:17 35:6 35:13
<b>primarily</b> [1] 25:6	<b>radiation</b> [1] 26:9	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>removing</b> [1] 11:13	<b>removal</b> [4] 11:6 12:4 14:2 14:12	<b>sheet</b> [2] 3:19 5:12
<b>principally</b> [2] 15:24 17:16	<b>radiological</b> [3] 21:19 24:19 27:19	<b>remediation</b> [3] 3:6 3:11 28:22	<b>reporter</b> [2] 4:1 4:6	<b>Reporting</b> [1] 1:24	<b>sheets</b> [1] 4:9
<b>probability</b> [1] 17:24	<b>radionuclides</b> [2] 17:6 30:14	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>representatives</b> [2] 4:20 4:25	<b>required</b> [3] 21:12 25:11 28:14	<b>shifted</b> [1] 8:10
<b>problem</b> [1] 36:23	<b>radium</b> [8] 21:23 28:6 28:8 28:9 28:11 28:16 28:18 29:4	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>research</b> [4] 8:11 8:11 26:11 27:10	<b>resident</b> [1] 16:11	<b>Shop</b> [1] 8:21
<b>problems</b> [1] 31:23	<b>radium-226</b> [2] 12:11 17:7	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>residential</b> [5] 16:10	<b>residual</b> [3] 11:8 11:14 15:4	<b>Shops</b> [1] 8:17
<b>process</b> [5] 13:12 13:18 24:5 31:11 33:24	<b>railroad</b> [2] 11:3 27:2	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>required</b> [3] 21:12 25:11 28:14	<b>response</b> [2] 29:10 34:25	<b>short</b> [1] 34:23
<b>Processing</b> [1] 37:18	<b>range</b> [1] 18:19	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>required</b> [3] 21:12 25:11 28:14	<b>responsiveness</b> [1] 3:23	<b>shorthand</b> [1] 38:13
<b>produce</b> [1] 15:14	<b>reached</b> [1] 7:6	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>required</b> [3] 21:12 25:11 28:14	<b>rest</b> [1] 34:25	<b>shortly</b> [1] 4:17
<b>produced</b> [2] 14:8 15:3	<b>reactor</b> [5] 8:10 8:11 8:16 26:11 27:10	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>required</b> [3] 21:12 25:11 28:14	<b>restriction</b> [1] 25:14	<b>show</b> [6] 17:7 17:13 17:18 18:5 19:18 32:6
<b>program</b> [4] 2:5 7:24 8:3 8:9	<b>reactors</b> [4] 2:24 4:12 8:13 35:15	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>required</b> [3] 21:12 25:11 28:14	<b>result</b> [5] 13:15 17:1 17:25 18:4 25:13	<b>showed</b> [1] 19:21
<b>project</b> [8] 3:12 4:24 5:17 6:5 7:4 8:23 9:14 37:19	<b>read</b> [3] 29:12 34:5 37:9	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>required</b> [3] 21:12 25:11 28:14	<b>results</b> [4] 3:10 17:20 17:21 19:23	<b>showing</b> [2] 18:7 20:1
<b>projects</b> [2] 3:5 36:9	<b>real</b> [1] 30:15	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>required</b> [3] 21:12 25:11 28:14	<b>review</b> [1] 4:17	<b>shown</b> [1] 16:21
<b>propose</b> [1] 35:10	<b>reason</b> [1] 36:24	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>required</b> [3] 21:12 25:11 28:14	<b>RI/FS</b> [2] 15:10 34:6	<b>shows</b> [5] 11:15 17:12 17:23 19:23 19:25
<b>proposed</b> [14] 1:7 2:19 3:2 3:15 3:17 3:18 4:11 4:22 15:9 15:11 20:23 34:5 36:10 38:1	<b>receptors</b> [1] 10:2	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>required</b> [3] 21:12 25:11 28:14	<b>right</b> [12] 8:13 11:4 14:18 18:5 18:11 20:13 27:21 28:13 30:12 30:17 34:15 36:22	<b>side</b> [1] 31:25
<b>proposing</b> [1] 35:9	<b>recommendation</b> [1] 28:13	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>required</b> [3] 21:12 25:11 28:14	<b>risk</b> [42] 6:2 9:17 9:18 9:22 9:24 9:25 10:8 13:13 13:23 15:3 15:20 15:22 16:1 16:2 16:5 16:6 16:9 16:16 16:24 17:20 17:22 17:23 17:23 18:5 18:7 18:8 18:11 18:14 18:19 19:1 19:9 19:18 19:21 19:22 19:25 19:25 20:7 20:20 21:3 21:22 21:22 23:1	<b>sign</b> [2] 3:4 5:12
<b>Propulsion</b> [2] 7:24 8:3	<b>recommended</b> [1] 9:19	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>required</b> [3] 21:12 25:11 28:14	<b>roughly</b> [2] 3:3 5:21	<b>signed</b> [1] 3:25
<b>protect</b> [1] 23:18	<b>recommending</b> [1] 31:10	<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>required</b> [3] 21:12 25:11 28:14	<b>Russians</b> [1] 7:21	<b>signs</b> [3] 25:7 25:9 26:18
<b>Protection</b> [2] 2:15 6:13		<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>required</b> [3] 21:12 25:11 28:14	<b>S</b> [1] 38:9	<b>similar</b> [2] 19:16 29:11
<b>provides</b> [1] 24:5		<b>remedies</b> [8] 24:3 24:10 24:22 24:23 26:16 29:13 29:16 30:2	<b>required</b> [3] 21:12 25:11 28:14	<b>sampling</b> [3] 28:7 28:15 29:3	<b>Simpson</b> [11] 2:3 2:3 5:24 7:12 34:2 34:12 34:20 35:2 35:14 35:17 37:11

18:5	18:5	18:18	29:25	30:24	31:4	17:19	38:3	7:6	9:7	9:17	
18:23	19:19	19:20	solution [1]	7:7	summarized [1]	20:20	thereafter [1]	38:14	9:22	10:2	10:12
20:11	20:14	20:16	solvents [2]	10:19	summarizes [1]	15:9	therein [1]	38:13	11:12	13:2	15:22
21:22	21:23	21:24	17:16		summary [2]	3:23	thinks [1]	6:24	16:4	19:4	19:24
22:3	22:5	25:14	sometime [3]	3:5	19:22		Third [1]	3:16	23:15	23:18	24:25
26:23	27:2	27:3	3:25	17:25	summer [1]	3:6	Thirty-one [2]	9:11	27:11	27:17	27:18
27:4	27:5	27:6	soon [1]	33:22	support [1]	26:25	9:14		type [3]	31:14	31:18
27:6	27:8	27:9	south [2]	11:18	surface [1]	33:7	thought [3]	7:22	38:14		24:22
27:15	27:22	28:5	27:20		surrounding [1]	30:5	36:18	37:9	types [1]		
28:8	28:10	28:15	space [1]	33:1			three [5]	9:7			
29:24	29:25	29:25	speak [1]	35:21			12:14	17:19			
30:1	30:6	30:6	speaker [1]	5:3							
31:18	32:13	35:12	specifically [3]	14:2			three-fold [1]	3:9			
35:16	36:7	36:23	14:21	17:14			Three-mile [1]	8:19			
37:3			specified [1]	23:13			threshold [4]	23:16			
site-wide [2]	9:24		spill [15]	10:25			23:16	24:25			
16:2			11:2	11:10			through [9]	9:8			
sites [61]	9:11		12:23	14:3			10:7	13:11			
9:15	9:16	9:21	17:15	18:18			25:6	28:10			
9:22	10:2	10:5	20:16	22:3			31:3	36:10			
10:7	10:9	10:12	27:9	27:13			Thursday [1]	35:8			
10:13	11:16	12:12	spills [1]	13:8			Tim [1]	6:7			
12:21	13:16	13:19	spot [1]	20:14			times [1]	22:23			
13:24	14:1	15:17	spring [1]	3:7			today's [1]	9:5			
15:18	16:7	16:12	square [1]	34:10			tomorrow [1]	35:7			
16:25	17:8	17:17	ss [1]	38:6			tonight [13]	2:6			
17:18	18:15	18:16	stainless [1]	12:15			4:2	4:5			
19:4	19:4	19:5	standard [2]	19:12			9:21	14:20			
19:17	20:8	21:4	19:13				21:14	24:16			
21:17	21:19	21:20	standards [1]	9:5			33:10	34:3			
21:21	22:6	22:15	standing [1]	26:19			tonight's [1]	3:8			
22:16	22:17	22:19	start [1]	33:23			too [5]	4:5			
22:25	22:25	23:5	started [8]	7:19			7:23	10:2			
23:6	24:17	24:18	7:24	7:25			took [1]	11:7			
24:20	24:21	24:21	13:20	21:8			top [4]	13:7			
25:24	26:5	26:8	23:9				26:19	31:22			
26:9	27:17	27:18	state [13]	2:16			total [1]	33:13			
29:6	34:14	34:18	4:19	6:10			tour [1]	10:8			
sits [3]	11:16	12:14	15:13	23:22			toxicity [1]	19:6			
34:18			35:1	35:20			Track [2]	13:22			
situ [6]	30:7	30:23	38:6	38:10			tracks [3]	11:3			
30:24	31:10	31:16	statements [3]	4:20			11:7	27:2			
32:14			4:21	6:16			transcript [1]	38:15			
six [1]	15:19		steel [2]	12:16			transferring [2]	11:23			
size [1]	33:3		11:13	12:5			12:24				
skill [1]	38:17		stone [1]	6:24			treat [2]	26:4			
slide [7]	16:14	16:15	storage [1]	29:7			treatability [4]	30:18			
17:21	19:14	19:22	stored [1]	8:22			31:15	32:3			
19:25	20:1		stories [1]	32:1			treating [1]	29:24			
slides [3]	15:19		straight [1]	12:1			treatment [4]	30:6			
17:19	19:24		Street [1]	1:24			30:7	31:14			
sludge [1]	14:14		study [11]	1:7			triangular [1]	11:17			
small [3]	10:2		2:8	2:12			truck [2]	11:24			
12:5	34:13		15:8	15:21			true [2]	2:10			
soak [2]	13:5	32:20	31:15	32:3			try [2]	4:5			
soil [30]	10:13	10:24	37:17				TSF-07 [1]	12:7			
11:16	11:18	11:25	stuff [4]	10:19			turn [2]	7:13			
12:6	12:20	13:1	12:19	12:25			turntable [2]	11:18			
13:7	16:20	18:16	submit [1]	3:18			11:19				
19:20	20:17	21:17	successful [1]	14:25			turpentine [1]	10:19			
21:18	21:20	24:18	summarize [2]	15:20			two [20]	3:3			
25:24	26:2	26:5									
27:17	27:20	28:2									
29:1	29:23	30:3									
30:5	31:13	32:12									
32:13											
soils [8]	10:11	10:11									
27:5	27:23	27:24									

**walk** [2] 18:25 24:24  
**War** [2] 2:10 7:19  
**warn** [2] 25:8 25:12  
**waste** [9] 5:17  
     5:18 5:19 6:7  
     7:14 9:3 10:18  
     12:17 14:10  
**water** [6] 8:11  
     8:15 25:10 26:10  
     26:19 27:10  
**weeks** [1] 3:3  
**Welfare** [1] 6:11  
**wells** [1] 14:8  
**White** [1] 35:24  
**whole** [2] 12:6  
     37:3  
**Wilkening** [3] 6:12  
     7:1 7:1  
**wind** [1] 11:25  
**within** [2] 13:3  
     37:19  
**WITNESS** [1] 38:20  
**word** [1] 36:13  
**words** [3] 24:4  
     25:22 25:25  
**worked** [2] 6:18  
     36:24  
**worker** [3] 16:6  
     16:6 18:3  
**works** [1] 32:5  
**worst** [1] 18:7  
**wound** [1] 8:9  
**write** [1] 3:20  
**written** [2] 3:18  
     6:24

---

**-Y-**


---

**Y** [1] 38:9  
**year** [4] 3:7 5:21  
     26:20 33:21  
**years** [14] 2:20  
     5:23 5:24 9:3  
     9:7 11:6 16:7  
     16:13 26:21 31:18  
     36:7 37:3 37:5  
     37:6  
**yet** [1] 6:24

---

**-Z-**


---

**Z** [1] 38:9